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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,468	12/20/2005	Robert Alexander Van Eibergen Santhagens	NL030751	8162

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EXAMINER	
DEFRANK, JOSEPH S	
ART UNIT	**PAPER NUMBER**
3724	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/561,468	VAN EIBERGEN SANTHAGENS, ROBERT ALEXAND	
	Examiner	Art Unit	
	JOSEPH DEFRANK	3724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 December 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 December 2005* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to the amendment filed on 12/12/08. Claims 1-9 are pending.

2. It is noted that the specification has been amended, but still does not include proper headings. Although these headings are not required, they are still strongly recommended by the examiner.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the blade thickness at the bending point being larger than the non-bending area blade thickness (claim 3) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. Examiner notes that in the arguments filed on 12/12/08, applicant claims, "FIG. 2 does, in fact, illustrate that the thickness of the razor blank material in the bending zone 9 is thicker than the thickness of the blade material 'a'" (see page 14). Examiner notes the statement but respectfully disagrees. There is no noticeable difference in the blade thickness at the bending zone (9) in figure 2. Examiner has even taken a ruler to the drawings and notes that there is no difference in thickness when measured as represented by figure 2.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Emmett (US 4,302,876; as cited in IDS) in view of Clark (US 972,436; as previously cited).

7. With respect to claim 1, Emmett discloses a razor blade (302) comprising an edge portion with a cutting edge (306), and a further portion, the edge portion being bent relative to the further portion (see figures 7 and 8) in a bending zone (area of the bend) spaced from said cutting edge by a bending device. Emmett does not disclose the blade wherein at least the edge portion has a material structure hardened by a first

heat treatment and in that the bending zone has a locally reheated structure formed subsequent to the first heat treatment. Tempering or annealing steel blades to obtain certain levels of hardness are well known in all blade arts.

Clark discloses a method of producing a razor blade wherein the entire blade is first hardened and tempered (page 1 lines 86-87) to create a hard edge which can be shaped into a cutting edge (see page 2 lines 1-2). Then areas of the blade which are intended to be bent are locally annealed (reheated) to form softer material in order to create a steel that is more flexible (see page 1 lines 95-99). Clark locally reheats the material (as opposed to reheating the entire blade) in order to preserve the hardness in the area of the cutting edge (see page 1 line 108 through page 2 line 2). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the technique of first heat treating the entire blade blank, and then subsequently locally annealing portions of the blade which are desired to be flexible as taught by the art of Clark to improve the blade of Emmett for the predictable result of having a hard cutting edge and a flexible central portion which can be easily bent into the angled blade as disclosed by Emmett.

8. With respect to claim 2, Emmet does not disclose specific dimensions for the blade, thus Emmett does not disclose the razor blade wherein the bending zone is less than 1 mm away from the cutting edge. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the blade of Emmett to have the bend be under 1 mm away from the cutting edge, since it has been held that where the general conditions of a claim are disclosed in the prior art,

discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Examiner further notes that this is an issue of scale and intended use. The larger the blade is as a whole, the larger the distance is.

9. With respect to claim 3, Emmett discloses the razor blade wherein the razor blade has a blade material thickness, the bending zone having a larger thickness than the blade material thickness. Emmett discloses that the blade is bent by "bending conventionally formed blades at some step in their manufacturing process" (column 6 lines 29-31). Through the laws of conservation of mass, a slight bulge will naturally occur during the bending process as a result of squeezing more material into a tighter place. This is why in the bending art, notching is well known to help facilitate bending as material is not needed to be displaced. Displacing the material during any sort of bend will cause a bulge and thus a larger thickness than the non bent area.

10. With respect to claim 4, Emmet discloses the razor blade wherein the razor blade is at least two razor blades (see figure 8) mounted parallel to each other in a razor head, wherein each razor blade has an edge portion with a cutting edge and a further portion, the edge portion being bent relative to the further portion in a bending zone spaced from said cutting edge, and wherein a spacing is present between the further portions of at least two of said razor blades, wherein the edge portion of at least one of said at least two razor blades is bent towards at least one neighboring one of said at least two razor blades and projects towards said at least one neighboring one of said at least two razor blades over a distance perpendicular to the further blade portion of said

razor blade which is smaller than the spacing between the further portions of these at least two of said razor blades.

11. With respect to claim 5, Emmett discloses the razor blade wherein the razor blade is at least two razor blades (see figure 8) mounted parallel to each other in a razor head, each razor blade having an edge portion with a cutting edge and a further portion, the edge portion being bent relative to the further portion in a bending zone spaced from said cutting edge, wherein a spacing is present between the cutting edges of at least two of said razor blades. As noted above, Emmett does not specifically disclose any dimensions in regards to the blade setup. Thus Emmett does not disclose the blade assembly wherein the spacing between successive cutting edges is less than 1.2 mm. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the blade assembly of Emmett to have the successive edges spaced less than 1.2 mm apart, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

12. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Emmett in view of Clark as applied to claim 1 above, and further in view of *Saturday Night Live "Mach 14"* (first aired 5-6-00; episode breakdown provided; hereafter SNL; as previously cited) or Pelizzola (US 1,920,711; as previously cited).

The modified apparatus of Emmett discloses the razor blade wherein the razor blade is at least two razor blades mounted parallel to each other in a razor head, each razor blade having an edge portion with a cutting edge and a further portion, the edge

portion being bent relative to the further portion in a bending zone spaced from said cutting edge, wherein a spacing is present between the cutting edges. Emmett does not disclose the razor blade wherein the cartridge has at least four razor blades. Examiner notes that the use of one, two, three, four, and five blades on shaver head cartridges is well known in the art.

Episode 483 of NBC's *Saturday Night Live* aired a skit titled "Platinum Mach 14" which features a razor having 14 blades (see provided photo). Pelizzola discloses a razor head having five blades (1-5) in order to shave "more quickly and more regularly, since the hair is cut by the various cutting edges in succession" (column 1 lines 9-11). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the razor head of Emmett to have at least four blades in view of the art of SNL or Pelizzola in order to improve the quality of the cutting experience.

13. Claims 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nissen (US 3,489,589; as previously cited) in view of Emmett and further in view of Clark.

14. With respect to claim 7, Nissen discloses a method of manufacturing a razor blade from a razor blade blank, the method comprising acts of: forming an edge portion (12) of the razor blade blank with a cutting edge and a further portion and hardening the razor blade blank by a heat treatment (10). Nissen does not disclose reheating after hardening of the razor blade blank a portion of the razor blade blank to bend the edge portion of the razor blade blank relative to the further portion of the razor blade blank.

Emmett discloses a razor blade (302) which is bent during the manufacturing

process between the edge and the further portion. The bending takes place during the manufacturing process (column 6 lines 29-31). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the method of Nissen to include a bending step in the manufacturing process in order to produce blades which are bent in view of the teachings of Emmett to allow the blades to be rinsed better when inserted into the cartridge. Examiner notes that the modified apparatus of Nissen still does not disclose reheating the metal after it has already been hardened. The method of Clark discloses locally reheating an already hardened blade strip in order to soften the material to make it more flexible instead of brittle (lines 94-99). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the process of Nissen to include a local reheating step in the area of the bend in order to prevent the blade from snapping. Examiner notes that the blade is too brittle to bend without reheating.

15. With respect to claim 9, the modified method of Nissen discloses the cutting edge being ground after hardening, but does not disclose the cutting edge being ground before bending. Examiner notes that cutting edges are typically ground after hardening in order to maintain the edge. Further, it is noted that there exists a finite number of positions for the bending of the blade stock to exist. There are four basic steps to the method: heat treating, grinding, bending after the preheating, and sectioning into individual blades. Thus, there are only four possible positions for the preheating and bending steps to take place. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to try bending the blade stock after the

cutting edge has already been ground as a person with ordinary skill has good reason to pursue the known options within his or her technical grasp. The claim would have been obvious because "a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense."

16. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nissen in view of Emmett and further in view of Clark as applied to claim 7 above, and further in view of Creamer et al. (US 3,224,900; hereafter Creamer; as previously cited).

With respect to claim 8, the modified apparatus of Nissen does not disclose the local heating of the razor blade blank being carried out by use of a laser. Examiner notes that the use of a laser to heat small areas of metals is well known in the art. Also, lasers are used to melt metals for welding. Creamer discloses that it is well known to heat metals using a laser (column 3 paragraph 2). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the modified method of Nissen to use lasers to locally reheat the metal instead of heated wheels in view of the teachings of Creamer. The claim would have been obvious because a particular known technique was recognized as part of the ordinary capabilities of one skilled in the art.

Response to Arguments

17. Examiner notes that in the arguments filed on 12/12/08, applicant claims, "FIG. 2 does, in fact, illustrate that the thickness of the razor blank material in the bending zone 9 is thicker than the thickness of the blade material 'a'" (see page 14). Examiner notes

the statement but respectfully disagrees. There is no noticeable difference in the blade thickness at the bending zone (9) in figure 2. Examiner has even taken a ruler to the drawings and notes that there is no difference in thickness when measured as represented by figure 2. It is noted that the following was also stated above in the "Drawings" portion of this office action.

18. Applicant's arguments with respect to claims 1-5 have been considered but are moot in view of the new ground(s) of rejection.

19. Applicant's arguments filed with respect to claims 7-9 have been fully considered but they are not persuasive.

20. Applicant argues that Nissen in view Emmett and further in view of Clark does not disclose "reheating, after hardening of the razor blade blank, a portion of the razor blade blank locally to bend the edge portion of the razor blade blank relative to the further portion of the razor blade blank." More specifically, applicant argues, "Clark clearly does not disclose reheating, after hardening of the razor blade blank, a portion of the razor blade blank locally to bend the edge portion of the razor blade blank relative to the further portion of the razor blade."

Examiner respectfully disagrees. It is noted that, Nissen teaches a method of manufacturing a razor blade wherein the razor blade is hardened through a heat treating process (10). Emmett discloses a razor blade which is bent to produce the same product as the applicants but does not disclose the heat treatment sequence. Clark teaches a heat treatment sequence which involves heat treating an entire blade under a first treatment to produce a hard, brittle blade. The blade is then locally

annealed in areas which need to be softer and more flexible than the hardened edge of the blade (see page 1 line 95 through page 2 line 2). Examiner notes that under rejection of claim 7, Clark provides the heat treating steps and the teaching of first hardening a blade and then locally annealing the blade to make that specific area more flexible. Emmett is that art which discloses the bending of the blade. The blade of Emmett does not come out of the ground in an already sharpened, bent blade form, it has to get that way through a manufacturing process. Bending a brittle blade that is hardened is not plausible as the blade will snap or break due to the brittleness after that first hardening process. Clark teaches the technique of locally reheating a portion of a blade blank so that it becomes more flexible than the hardened edge portions. Anybody skilled in the art of razor making would understand this trait of a flexible area is desirable when bending metal such as creating the bent blade of Emmett.

Conclusion

21. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSEPH DEFRANK whose telephone number is (571)270-3512. The examiner can normally be reached on Monday - Thursday; 9am-6pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached on (571) 272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason Daniel Prone/
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